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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/785,589	02/23/2004	Anthony D. McGettigan	OC0409US	3227
27975	7590	12/14/2005	EXAMINER	
ALLEN, DYER, DOPPELT, MILBRATH & GILCHRIST P.A. 1401 CITRUS CENTER 255 SOUTH ORANGE AVENUE P.O. BOX 3791 ORLANDO, FL 32802-3791			PRITCHETT, JOSHUA L	
			ART UNIT	PAPER NUMBER
			2872	

DATE MAILED: 12/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H:A

**Office Action Summary**

Application No.

10/785,589

Applicant(s)

MCGETTIGAN ET AL.

Examiner

Joshua L. Pritchett

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --****Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 October 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

This action is in response to Amendment after non-final rejection filed October 17, 2005.

All applicant's arguments have been considered.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1, 2, 4, 5, 11, 12, 14, 15 and 17-20 are rejected under 35 U.S.C. 102(a) as being anticipated by Seiberle ("Photo Aligned Anisotropic Optical Thin Films").

Regarding claim 1, Seiberle discloses an anti-aliasing filter comprising a substrate; a first DRP of the anti-aliasing filter having at least a first LPP layer connected to the substrate and a first LCP layer disposed on the first LPP layer, the first DRP having a thickness selected so as to provide a selected separation of ordinary and extraordinary light rays (Fig. 5).

Regarding claim 2, Seiberle discloses the first LPP layer is disposed on the substrate (Fig. 5).

Regarding claim 4, Seiberle discloses a second LCP layer disposed on the first LCP layer (page 1163 col. 1).

Regarding claim 5, Seiberle discloses the first LPP layer has a selected orientation and the second LCP layer has the selected orientation (Fig. 9).

Regarding claim 11, Seiberle discloses a retarder plate disposed on the first DRP and a second DRP disposed on the retarder plate (Fig. 9; page 1163 col. 1).

Regarding claim 12, Seiberle discloses the retarder plate and the second DRP are selected so as to provide a two-dimensional anti-aliasing filter for at least one color of light (Fig. 6).

Regarding claim 14, Seiberle discloses the retarder plate includes a plurality of quarter-wave retarder plates (page 1162 col. 2).

Regarding claim 15, Seiberle discloses the first DRP, the retarder plate, and the second DRP are all made from an LPP material and a LCP material (Fig. 9).

Regarding claim 17, Seiberle discloses the substrate is infrared blocking color claims (page 1165 col. 1). Seiberle states the substrate is quartz which is known as an IR blocker.

Regarding claims 18 and 19, Seiberle discloses an infrared blocking filter (Fig. 4).

Regarding claim 20, Seiberle discloses a package and a photodetector array disposed within the package, the anti-aliasing filter being disposed on the package (Figs. 3, 4, 6 and 7). A package that includes a photodetector array would be inherent in order to obtain the data displayed in Figs. 3, 4, 6 and 7.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 10, 13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seiberle ("Photo Aligned Anisotropic Optical Thin Films").

Regarding claims 3 and 10, Seiberle teaches the invention as claimed but lack reference to an intervening layer or an adhesive. It is extremely well known in the art to use an adhesive layer to attach layers to a substrate. Official Notice is taken. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the Seiberle invention include an adhesive layer as is known in the art for the purpose of better adhesion between the LPP and substrate and reduced internal stress.

Regarding claims 13 and 16, Seiberle teaches the invention as claimed and suggests that the materials used for the LPP and LCP in the anti-aliasing filter can be chosen to provide any desired results (page 1164 col. 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the Seiberle invention include materials to provide the claimed function as suggested by Seiberle for the purpose of providing a different filtering function for different wavelengths.

Claims 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seiberle ("Photo Aligned Anisotropic Optical Thin Films") in view of Daishinku Corp ("Optical Low Pass Filters").

Seiberle teaches the invention as claimed but lacks reference to the use of the claimed thickness and the use of an antireflective filter. Daishinku Corp teaches the use of a thickness between about 10 and about 150 microns (page 3 specifications) and a first and second antireflective filter placed on first and second surfaces of the anti-aliasing filter (page 3 example of products). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the Seiberle invention include the thickness and antireflective filters of Daishinku Corp for the purpose of precisely filtering the incident wavelengths while not reflecting incident light beam.

### *Response to Arguments*

Applicant's arguments filed October 17, 2005 have been fully considered but they are not persuasive.

Applicant argues that Seiberle is not an anti-aliasing filter. Anti-aliasing filters minimize jagged patterns of a high resolution image when displayed at a lower resolution. This is an intended use of the filter structure claimed in the claim limitations and therefore is not given significant patentable weight. Seiberle teaches all the claimed components of an anti-aliasing filter and all the claimed components of the double refraction plate (DRP) and therefore would be able to perform any of the claimed functions of the anti-aliasing filter and DRP. If there are more elements that make the filter or DRP function in the claimed manner the applicant must put those elements in the claim limitations.

Applicant argues that no DRP are shown. According to the claimed limitations a DRP comprises a liquid photo-polymerization (LPP) layer and a liquid crystal polymer layer

(LCP). Seiberle teaches the use of an LPP and an LCP in combination and therefore a DRP is present as required by the claimed limitations.

Applicant further argues that the thickness of the LCP layer is not selected to provide separation of ordinary and extraordinary light rights. Seiberle teaches the thickness of the LCP layer can be selected to achieve any desired optical function (page 1162 col. 2). The thickness of the LCP layer is shown in Fig. 5. The claim language does not state a required thickness range to achieve the desired function, therefore the statement of Seiberle that the thickness can be chosen to achieve a desired optical function satisfies the claimed limitations.

Applicant argues that the prior art does not teach the DRP selected to provide two-dimensional anti-aliasing filter. The prior art teaches all the claimed structure of the invention and therefore is capable of performing all the claimed functions of the invention.

Applicant argues that the prior art lacks a package containing a photodetector array. The Seiberle reference shows data obtained using the system; therefore some means of photodetection must inherently be present. A package can be interpreted to mean a system and the combination of the filter and photodetection means is a system.

Applicant argues that there is no suggestion to combine Seiberle and Daishinku. The thickness of the filter layer balances the desired impact of the filter on the incident light beam and the amount of light absorbed by the filter. The thicker the filter the more significant the desired impact on the incident light beam. However, more light is absorbed thus reducing the intensity of the transmitted light resulting in either less light to the detector or a need for a stronger light source, which costs more. A thin filter absorbs less light but does not have a great of a desired impact on the incident light beam. Therefore the thickness of the layer is very

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important. The Daishinku reference has a thickness that satisfies the balancing of the desired impact and light absorption and therefore it would be advantageous to combine the thickness teaching with Seiberle to maximize the efficient use of the incident light beam.

### *Conclusion*

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua L. Pritchett whose telephone number is 571-272-2318. The examiner can normally be reached on Monday - Friday 7:00 - 3:30.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew A. Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JLP



**DREW A. DUNN**  
**SUPERVISORY PATENT EXAMINER**